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JOSHUA LEDERBERG

PRESIDENT

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*He should
now at*
↓

Dear Gordon:

Thank you for your manuscript on Avery, MacLeod, and
McCarty: Revolutionaries or Puzzle-Solvers?

It would be easier to go over it with you orally, and I
would be happy to do that. I make a few comments now:

- 1) In the early part of your paper, you tend to put the
entire community in one pigeonhole. Later you are
more discriminating.
- 2) You make too much of "directed mutation" versus gene
transfer. "DM" can hardly be other than an infor-
mation transfer, as we would now say. I was able to
write of "DM" and "transfer of bits of chromosomes"
in the same breath (in 1947). "Chemical mutagen" is
a post-1944 construct.
- 3) I did/do tax Avery's colleagues for taking until 1951
(Hotchkiss) to study other markers, linkage... in the
pneumococcus transformation. Card-carrying geneticists
would have done that first thing! The technical diffi-
culties of pneumococcal transformations were the main
reason this was "not more actively pursued" after 1944.
Certainly I pursued it promptly, with other systems.
Boivin tried; but he lost the E. coli strains; Tatum
and I could not reproduce his findings.

Boivin's and my motives were the future mainstream of
molecular biology. Until there was a solid conviction that
DNA=genes, there would have been little attention to the
double helix. So 1944-1952 did lay the groundwork for that

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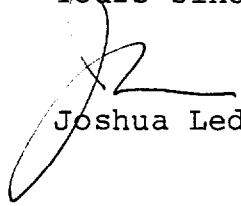
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conviction. Double helical structures then laid the ground-work for plausible mechanisms of heredity. The "revolution" was less sudden and more of an evolutionary progression than you make out. And it was hardly "incommensurable" with pre 1953.

(Page 25) Neurospora has been transformed, circa 1982.

You have done well in sorting out the diverse questions.

Yours sincerely,



Joshua Lederberg

Encl. P56,⁸¹